COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Northern Virginia Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Bergmann's Cleaning, Incorporated
2147 Lee Highway
Arlington, Virginia 22201
Permit No. NVRO71868

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Bergmann's Cleaning, Incorporated has applied for a Title V Operating Permit for its dry cleaning facility located in Arlington County. The Department has reviewed the application and has prepared a Title V Operating Permit.

Engineer/Permit Contact:_____ Date:

Air Permit Manager:_____ Date:

FACILITY INFORMATION

Permittee
Bergmann's Cleaning, Incorporated
2147 Lee Highway
Arlington, Virginia 22201

Facility
Bergmann's Cleaning, Incorporated
2147 Lee Highway
Arlington, Virginia 22201

County-Plant Identification Number: 51- 013-00212

SOURCE DESCRIPTION

NAICS Code: 81230 - Drycleaning and Laundry Services (except Coin-Operated)
(formerly SIC Code 7216)

NAICS Code: 561740 - Carpet and Upholstery Cleaning (formerly SIC code 7217)

Bergmann's Cleaning, Incorporated provides dry cleaning services (clothing and rugs) at its facility in Arlington County. It operates five Multimatic dry-to-dry cleaning machines. Two machines with 110 pound capacity each, and three with 65 pound capacity, each. There are two small gas/No. 2 oil-fired boilers for process steam production at the plant. Previously both were Cleaver Brooks boilers, each with a capacity of 150 horsepower (6 million Btu/hour heat input). However, earlier in the year there was a boiler failure that led to replacing one with a new Fulton model RB with a rated capacity of 125 horsepower (5 million Btu/hour heat input). The new and existing boilers are not subject to air permitting based on capacity (less than 10 million Btu/hour).

The facility is a Title V major source of perchloroethylene (perc), a hazardous air pollutant. It is located in a moderate ozone non-attainment area. However, perc is not considered a volatile organic compound (VOC). The five dry cleaning machines are subject to the federal MACT standards, as stated in 40 CFR Part 63, Subpart M-Perchloroethylene Air Emissions Standards for Dry Cleaning Facilities. The small boilers are subject to the existing emission standards for fuel burning equipment as stated in our Virginia air regulations.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, was conducted on July 25, 2005. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance.

In 2004 the facility was subject to enforcement action by DEQ for problems found with dry cleaning machines leaking perc and failure to report the problems, as required by their Title V permit and MACT regulations of 40 CFR Part 63, Subpart M. The facility was issued a Notice of Violation on December 1, 2004, alleging noncompliance with permit Condition IV. A. 5. or 40 CFR 63.322(e)(1) for the emissions of perchloroethylene from dry cleaning equipment and not reporting it in the semi-annual permit deviation report as required by permit Condition VII. C. 3. The facility was also cited for installing a small cold solvent cleaning machine without notifying DEQ and not operating it in compliance with the Regulations. The facility and DEQ then entered into a Consent Order on January 10, 2005, to resolve the alleged noncompliance cited in the Notice of Violation. The Consent Order specified the requirements that Bergmann's Cleaning, Inc. had to meet to achieve compliance and imposed a civil charge of $17,014. Since then, the facility has paid the civil penalty, chosen to remove the cold solvent cleaning equipment and addressed the other violation by making greater effort to prevent perc leakage and report any deviations to the DEQ. The facility is being given increased compliance attention to verify that continuous compliance is maintained.

The facility was subject to a follow-up inspection on July 25, 2005. Then, a letter was sent by DEQ on August 8, 2005, stating that Bergmann's Cleaning, Inc. had satisfactorily demonstrated compliance with the terms of the Consent Order.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device Description (PCD)	PCD ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
B-3	S-3	Natural gas/#2 oil-fired boiler Cleaver Brooks 150 Hp	6 million Btu/hr input	N/A	N/A	N/A	N/A
B-4	S-4	Natural gas/#2 oil-fired boiler Fulton model RB, 125 HP (2005)	5 million Btu/hr input (installed July 2005)	N/A	N/A	N/A	N/A
Dry Cleaning Equipment							
C-1, C-2	room vent	Multimatic Dry Cleaning machines 1994 - Atlas #840894-5712	110 lbs clothes, each	Built-in refrigerated (cooler) condenser and distillation unit	N/A	perc	N/A
C-3	room vent	Multimatic Dry Cleaning machine 1989- Shopstar 500 ST	65 lbs clothes	built-in refrigerated (cooler) condenser with external distillation unit	N/A	perc	N/A
C-4, C-5	room vent	Multimatic Dry Cleaning machines 1989- Shopstar 500 ST	65 lbs clothes, each	built-in cooler condenser with shared external DCI distillation unit	N/A	perc	N/A

*The Size/Rated capacity [and PCD efficiency] is provided for informational purposes only, and is not an applicable requirement.

EMISSIONS INVENTORY

A copy of the 2004 Emission Statement and Annual Update is attached. Emissions are summarized in the following tables.

2004 Actual Emissions

	2004 Criteria Pollutant Emission in Tons/Year				
Emission Unit	VOC	CO	SO_2	PM_{10}	NO_x
Fuel Burning Equipment*	0.13	2.04	0.01	0.18	2.43

* Emissions from operating two Cleaver Brooks 150 HP boilers, both still operating in 2004. One of the Cleaver Brooks boilers was replaced in 2005 with a Fulton model RB, 125 HP.

2004 Facility Hazardous Air Pollutant Emissions

Pollutant	2004 Hazardous Air Pollutant Emission in Tons/Yr
Perchloroethylene (perc)	31.45

EMISSION UNIT APPLICABLE REQUIREMENTS - [emission unit or units]

Fuel Burning Equipment Requirements - Units # B-3 & B-4

Limitations

The following limitations are applicable to existing fuel burning equipment, Cleaver Brooks boiler (B3) and also the replacement new boiler, Fulton model RB (B4), as stated in 9 VAC 5 Chapter 40-Article 8 (Rule 4-8) of the Air Regulations. Rule 4-8 for existing sources is also applicable to new and modified units below the permit threshold. Northern Virginia Region has more stringent emission standards for fuel burning equipment. Non-permitted equipment are subject to general standards such as visible emissions limits as well.

The following Virginia Administrative Code that have specific emission requirements have been determined to be applicable:

9 VAC 5-40-900 A.2a. - Particulate matter emission limit of 0.3 pounds per million Btu

apply to existing fuel burning installations in Northern Virginia Region (AQCR 7) with heat input capacity less than 100 million Btu per hour. The limit for existing Cleaver Brooks boiler (B3), rated at 6 million Btu/hour, is calculated to be 1.8 lbs/hour. The limit for the new Fulton boiler (B4), rated at 5 million Btu/hour boiler, is calculated to be 1.5 lbs/hour.

9 VAC 5-40-930 A2. - Sulfur dioxide emission limit for existing fuel burning equipment using liquid or gaseous fuel in Northern Virginia Region (AQCR7) is given by expression S=1.06K, where S is sulfur dioxide emission limit in lbs/hour, and K is the total heat input capacity in MMBtu/hour. The limit for existing Cleaver Brooks boiler (B3), rated at 6 million Btu/hour, is calculated to be 6.4 lbs/hour. The limit for the new Fulton boiler (B4), rated at 5 million Btu/hour boiler, is calculated to be 5.3 lbs/hour.

9 VAC 5-50-80 - Visible emissions limit for new and modified equipment shall not exceed twenty percent (20%) opacity except during one six-minute period in any one hour in which visible emissions shall not exceed thirty percent (30%) opacity.

Monitoring and Recordkeeping

Records are to be maintained on all monitoring and testing required by the permit. These records include documentation regarding the distillate fuel oil volume delivered, date of delivery and name of supplier. Also monthly records of natural gas and fuel oil throughput for the boilers shall be used to calculate the annual throughput over the previous 12 consecutive months.

Actual emissions from the operation of the two boilers (B-1 and B-2) will be calculated for the emissions inventory using the annual throughput of natural gas and distillate fuel oil and factors given in EPA's Compilation of Air Pollutant Emission Factors (AP-42). The following table provides the factors found in the fifth edition of the document.

Pollutant	Natural Gas Emission Factor (lbs/million cubic feet)	No. 2 Oil Emission Factor (lbs/thousand gallons)
Nitrogen Dioxide (NO_2)	100	20
Sulfur Dioxide (SO_2)	0.6	142 x % sulfur content of fuel
Carbon Monoxide (CO)	84	5
Volatile Organic Compounds	5.5	0.34
Particulate Matter (PM-10)	7.6	1

Actual emissions are calculated by multiplying the appropriate emission factor and the fuel throughput in proper units. The Cleaver Brooks 6 million Btu/hour boiler (B-3) can burn maximum 6000 cubic feet/ hour or 0.006 million cubic feet/hour of natural gas; and 44 gallons/hour or 0.044 thousand gallons/hour of No. 2 oil, with maximum 0.5% sulfur content.

Therefore, the following are the calculated hourly emissions for that boiler by fuel type:

No. 2 Oil
PM-10 = (0.044 x1000 gal/hr) x (1 lb/1000 gal) = 0.044 lbs/hour
SO2 = (0.044 x1000 gal/hr) x (142 x 0.5 lbs/1000 gal) = 3.1 lbs/hour

Natural Gas
PM-10 = (0.006 million cf/hr) x (7.6 lbs/million cf) = 0.0456 lbs/hour
SO2 = (0.006 million cf/hr) x (0.6 lbs/million cf) = 0.0036 lbs/hour

The calculated emission is much lower than the allowed emission rates of 1.8 lbs/hr for particulates and 6.4 lbs/hour for sulfur dioxide. Therefore, compliance with the emission limits will be ensured by not exceeding boiler capacity and keeping records on type and throughput of fuel used.

Similarly, the Fulton 5 million Btu/hour boiler (B-4) can burn maximum 5000 cubic feet/ hour or 0.005 million cubic feet/hour of natural gas; and 35.5 gallons/hour or 0.0355 thousand gallons/hour of No. 2 oil with maximum 0.5% sulfur content. Therefore, the following are the calculated hourly emissions for that boiler by fuel type:

No. 2 Oil
PM-10 = (0.0355 x1000 gal/hr) x (1 lb/1000 gal) = 0.0355 lbs/hour
SO2 = (0.0355 x1000 gal/hr) x (142 x 0.5 lbs/1000 gal) = 2.5 lbs/hour

Natural Gas
PM-10 = (0.005 million cf/hr) x (7.6 lbs/million cf) = 0.038 lbs/hour
SO2 = (0.005 million cf/hr) x (0.6 lbs/million cf) = 0.003 lbs/hour

The calculated emission is much lower than the allowed emission rates of 1.5 lbs/hr for particulates and 5.3 lbs/hour for sulfur dioxide. Therefore, compliance with the emission limits will be ensured by not exceeding boiler capacity and keeping records on type and throughput of fuel used.

Visible emissions will be used as an indicator of boiler problems. The limit of 20% opacity should not be exceeded with use of cleaner fuels, natural gas and distillate No. 2 fuel oil. No.2 fuel oil may produce more emissions during startup, shutdown or malfunction but the Virginia air regulations exempts those periods from consideration.

Boiler inspection reports by DEQ compliance staff have revealed no past violations of the opacity limitations contained in this permit. The permittee shall continue to follow the manufacturer recommendations for proper operation and maintenance procedures and provide for operator training to minimize malfunctions and excess emissions. Records maintained on fuel supplier certification, proper maintenance and operating procedures will be used for demonstrate compliance with the visible emissions limitation also. Proper recordkeeping is used to satisfy the periodic monitoring requirements.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA has authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

No specific reporting requirement has been included in the permit, except that annual reporting to agency for emission inventory update and certified emission statement is required.

Streamlined Requirements

There were no streamlined requirements for the boilers.

Process Equipment Requirements - Units # C-1 thru C-5

Limitations

The process limitations stated in the permit are applicable to the dry-to-dry cleaning machines and are copied from the federal Regulations as given in 40 CFR Part 63, Subpart M - National Perchloroethylene Air Emissions Standards for Dry Cleaning Facilities. The citation after each condition provides specific paragraph from the subpart that was put in as a permit condition. Only the requirements for dry-to-dry machines with a refrigeration condenser control device are applicable to the facility and included in the permit.

Monitoring

Monitoring requirements for the dry-to-dry cleaning machines are specified in 40 CFR 63 Subpart M. It consists of measuring temperature at outlet side of refrigerator condenser t ensure it does not exceed 7.2 °C (45 °F). There is also the requirement to calculate the annual perchloroethylene consumption on monthly basis. Additional periodic monitoring is not required.

Recordkeeping

The permit includes requirements for maintaining records of the Limitations and Monitoring requirements as stated in the MACT standard given in 40 CFR Part 63 Subpart M. These records include receipts of perchloroethylene purchases, calculated consumption, dry cleaning equipment inspection for leaks, repair records, temperature sensor monitoring results, also a copy of the equipment specifications and operating manuals. The content and format of records shall be arranged with DEQ and be kept current for most recent 5 year period.

Testing

The permit does not require source tests. A table of test methods has been included in the

permit if testing is performed. The Department and EPA has authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Streamlined Requirements

There were no streamlined requirements for the dry-to-dry cleaning machines.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.1-20.01:2 and §10.1-1185 of the *Code of Virginia,* and the "Department of Environmental Quality Agency Policy Statement NO. 3-2001".

This general condition cites the Articles that follow:
Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Operating Permits for Stationary Sources]

This general condition cites the sections that follow:
9 VAC 5-80-80. Application
9 VAC 5-80-140. Permit Shield
9 VAC 5-80-150. Action on Permit Applications

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

J. Permit Modification

This general condition cites the sections that follow:
9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources

9 VAC 5-80-190. Changes to Permits.
9 VAC 5-80-260. Enforcement.
9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources

U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on general condition F.

This general condition cites the sections that follow:
9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction
9 VAC 5-80-110. Permit Content

STATE ONLY APPLICABLE REQUIREMENTS

Permit contains no state only requirements.

INAPPLICABLE REQUIREMENTS

> The startup, shut down, and malfunction opacity exclusion listed in 9 VAC 5-40-20 A 3 cannot be included in any Title V permit. This portion of the regulation is not part of the federally approved state implementation plan. The opacity standard applies to existing sources at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9 VAC 5-40-20 E, which state that "At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions."

The Department has determined that the following requirements are not applicable:

> New Source Performance Standards (NSPS), CFR Part 60, Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels for which Construction, Reconstruction, or Modification Commenced After July 23, 1984.

NSPS Subpart Kb is applicable to storage tanks with greater than 75 m^3 (19,817 gallon) capacity. Therefore, the 10,000 gallon fuel oil storage tank and 10,000 gallon gasoline dispensing tank are considered exempt.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation[1]	Pollutant(s) Emitted (5-80-720 B)	Rated Capacity (5-80-720 C)
D-1	10,000-gallon #2 fuel oil storage tank	9VAC 5-80-720B	VOC	-
D-2	10,000 gallon gasoline storage tank	9VAC 5-80-720B	VOC	-

[1]The citation criteria for insignificant activities are as follows:
9 VAC 5-80-720 A -Listed Insignificant Activity, Not Included in Permit Application
9 VAC 5-80-720 B - Insignificant due to emission levels
9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

Bergmann's Cleaning, Incorporated did not submit a request for confidentiality. Therefore, all portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

A public notice regarding the draft permit was placed in The Washington Times on September 16, 2005. The EPA was sent a copy of the draft permit, public notice and supporting documents on September 15, 2005, with request for concurrent review as a proposed permit. The affected States of Maryland and West Virginia, as well as the City of Washington, D.C., were sent a copy of the public notice on September 16, 2005. All persons on the Title V mailing list were sent a copy of the public notice by letter, fax or E-mail dated September 16, 2005. (However, three of the E-mail notifications did not go through, so the public notice information was sent by facsimile instead to Ms. Betz, Mr. Knauer and Mr. Nguyen).

No comments were received during the public comment period from September 16, 2005 to October 17, 2005. EPA also did not add any comments but confirmed on November 1, 2005, that DEQ could proceed to issue the proposed permit. The permit is to be issued November 4, 2005.